

(1) JP 56-12615

This reference discloses a microscope having an annular aperture stop. The microscope is provided with an annular filter at a position conjugate with the annular aperture stop to block a part of the 0-th order diffracted light.

(2) JP 58-16214

This reference discloses an annular illumination device for use in a microscope or the like. It teaches to use an optical element having a conic surface to form an annular light source image. As shown in its Fig. 2, a conical prism 6 is used to form an annular light source image 8 on an aperture of an annular aperture stop 5. Furthermore, as shown in Fig. 3, this reference teaches to enlarge the size (or diameter) of the annular light source image 8 by arranging the conical prism near a collector lens 2 and using an imaging lens 9 having a longer focal length instead of an imaging lens 7 in Fig. 2.

(3) JP 59-49514

This reference discloses an annular illumination device for use in a microscope or the like. It teaches providing a first optical member for shaping a light flux from a light source into a cylindrical light flux (i.e. a light flux with a circular cross section) and a second optical member for converting a cylindrical light flux into an annular light flux.

(4) JP 1-295215

This reference disclose an illumination device in which a light flux from a light source is made incident on a reflecting member at a predetermined angle so that a plurality of light source images are formed. Namely as shown in its Fig. 1, a coherent light from a laser source 1 is incident on a incident surface 9a of a square pillar member 9 via a scanning optical device 20 so that the coherent light is reflected by the inner surface of the square pillar device so as to exit from an exit surface 9b.